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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,317	11/23/2001	Morgan Grover	A-7200.RNFMP/cat	2646

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EXAMINER

VO, HUYEN X

ART UNIT PAPER NUMBER

2655

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/990,317

Applicant(s)

GROVER, MORGAN

Examiner

Huyen Vo

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/8/02 & 11/23/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4, 6-11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Godsill (IEEE Publication).

3. Regarding claim 1, Godsill discloses a method and system for extracting an audio signal from a noisy environment, comprising the step of: utilizing a non-Gaussian model to extract the audio signal from the noisy environment (*referring to sections 2-2.2 on pages 3797-3798*).

4. Regarding claims 2, 4, 11, and 13, Godsill further discloses a method in accordance with claim 1, further including the step of dynamically updating said non-Gaussian model during processing of the audio signal (*section 3 on page 3798*), and further including the step of updating the probability that the audio signal is present in the noisy environment (*section 3 on page 3798*).

5. Regarding claims 6-7, Godsill further discloses a method in accordance with claim 1, wherein the audio signal is speech, and wherein the audio signal is music (*sections 4 on page 3799*).

6. Regarding claims 8-9, Godsill further discloses a method in accordance with claim 1, wherein said non-Gaussian model is provided with a plurality of components (*parameters shown in the second column on page 3798*), and wherein said non-Gaussian model is provided with five components (*parameters  $V$ ,  $\theta$ ,  $\phi$ ,  $u$ , and  $y$  shown in the second column on page 3798*).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 5, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godsill (IEEE Publication) in view of Krasny et al. (US Patent No. 6349278).

9. Regarding claims 3 and 12, Godsill fails to specifically disclose a method and system in accordance with claims 2 and 10, further including the step of updating the power spectral density of the audio signal during processing of the

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audio signal. However, Krasny et al. teach the step of updating the power spectral density of the audio signal during processing of the audio signal (*col. 5, ln. 1 to col. 6, ln. 44*).

Since Godsill and Krasny et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Godsill by incorporating the teaching of Krasny et al. in order to determine filter coefficients to remove noise.

10. Regarding claims 5 and 14, Godsill further discloses a method and system in accordance with claims 3 and 12, further including the step of updating the probability that the audio signal is present in the noisy environment (*section 3 on page 3798*).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Huyen X. Vo

August 20, 2004

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SUSAN MCFADDEN  
PRIMARY EXAMINER